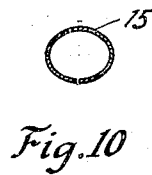
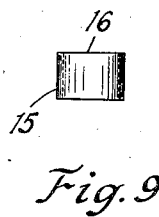
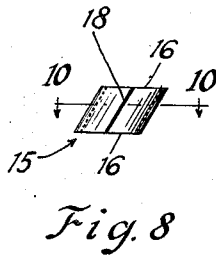
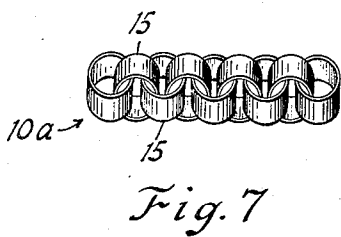
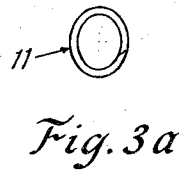
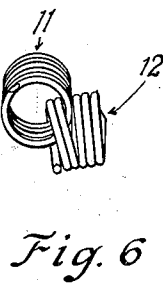
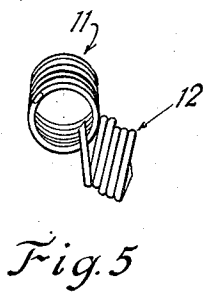
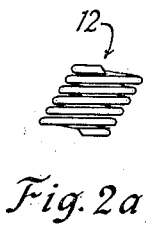
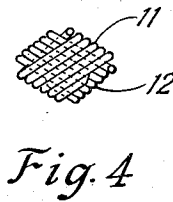
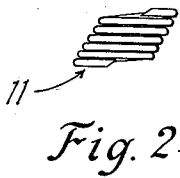


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M. RAHTHUS
ORNAMENTAL CHAIN
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UNITED STATES PATENT OFFICE

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ORNAMENTAL CHAIN

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3 Claims. (Cl. 59—83)

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This invention relates to an ornamental chain that can be used for bracelets, chokers, watch bands, rings, earrings, etc., in the jewelry and accessory trades.

Applicant is owner of Design Patent No. 151,403 issued on October 12, 1948, to applicant.

An object of this invention is to provide a chain of the character described which consists of either multiple links of wire or a single blank of flat stock formed into oval tubular shapes.

In accordance with the invention, the links of the wire chain are wound helically in a slanting direction alternately to the right and left and assembled interwovenly. The links are also alternately wound with right and left hand threads; so termed by the mechanical direction of the turns of the winding.

These opposite slanting right and left wound links are alternately assembled so the start and finish of each link is inserted interwovenly into the next link. The ends of each link: that is the start and finish of each link is entirely concealed within the next link leaving the chain with a desirable smooth appearance. Also the assembled chain has an alternately symmetrical appearance.

Another object of this invention is to provide a strong and rugged device of the character described which shall be relatively inexpensive to manufacture, which shall be attractive in appearance and practical to a high degree.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

Fig. 1 is a top view of a chain embodying the invention;

Fig. 2 is a side elevational view of one of the links;

Fig. 2a is a side elevational view of a link adjacent to the link of Fig. 2;

Fig. 3 is a front elevational view of said link;

Fig. 3a is a view of a link in the direction of its axis;

Fig. 4 is an end view of the chain shown in Fig. 1;

Fig. 5 is a perspective view illustrating the threading of one link with an adjacent link;

Fig. 6 is a perspective view illustrating continued threading of said links;

Fig. 7 is a top view of a chain embodying the invention; and illustrating a modification in which the links are made of sheet metal or the like material;

Fig. 8 is a side view of one of the links;

Fig. 9 is an end view of the link shown in Fig. 8; and

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Fig. 10 is a cross-sectional view taken on line 10—10 of Fig. 8.

Referring now in detail to the drawing, 10 designates a chain embodying the invention. Said chain 10 comprises alternating links 11 and 12 which are both made of coiled wire with the convolutions preferably contacting. Link 12 however is oppositely wound relative to link 11. In a direction perpendicular to their axes the links 11 and 12 are oval shape, and the convolutions are inclined to said axes. Preferably each end of each link is disposed adjacent one end of the long diameter of oval looking in the direction of the longitudinal axis of the link. The length of each link is such that the links can be inter-engaged. The length of each link is hence less than the long diameter of the oval.

The interengagement of links is effected by threading one link on to another as shown in Figs. 5 and 6 of the drawing. The wire of one link is opened up and threaded through the hole in the other link. The first link is then turned until the links are entirely engaged. The ends of the wire of which the links are made are hidden by adjacent links. The long diameter of the ovals of the links are in the longitudinal direction of the chain. The links are thus each wound helically in a slanting direction. The top and bottom convolutions of each link are parallel to one another and all the convolutions are substantially circular in their own planes.

The links of the chain are sized to fit closely and will stay in position and hold in place and will not come apart. No soldering is necessary.

Each link of the chain is free to move inside the other or next links, no mechanical connection having been made.

The general appearance of the chain is that of two waves or ripples alongside each other.

The completed chain tends to maintain itself in a straight line and does not sag or droop and lose its desirable appearance. If bent out of shape, due to its flex, the chain returns itself to a straight appearance. The springiness of the chain allows flex in all directions, and the chain never becomes tangled. The flex or stretch of the chain is very desirable in the sizing of watch bands, bracelets and rings. Self-supporting flexible rings can be assembled from this chain.

The start and finish of the windings could be bent inwards. This would be an additional aid to the links remaining in their assembled position if given rough handling.

The term flattened tube is used herein to denote the fact that the tubular coil has a major axis

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and a minor axis and is hence greater in dimension from side to side than from front to rear.

Another method of construction is using flat stock bent into slanting oval tubes, alternately slanting in opposite directions and sprung into connecting links. A tubular chain having the same general characteristics as the wire chain is thus obtained. The wire or flat stock could be either of metal or plastic material.

In Figs. 7 to 10 is shown the modification. In Fig. 7 is illustrated a chain 10a comprised of links 15 of tubular sheet metal and of oval cross-section. The upper and lower edges 16 of each link are parallel to each other and circular in shape. Each link may be made of flat stock with a longitudinal ream 18. The length of each link is such that the links may be interengaged.

It will be noted that each link displays a major diameter and a minor diameter. The free terminals of each link are substantially opposite the end of the major diameter and because of the location of the free ends of the links it is to be observed that these ends will be within the link next adjacent thereto. It will be further noted that each link comprises a flattened helix of substantially circular helical convolutions.

It will be further noted that the number of convolutions in each link is limited by the minor diameter coils. Also, it will be noted that with respect to the modification shown in Figs. 7 and 10, the height of the tubular member is limited or must be of such a size as to be capable of passing through the aperture defined by the minor and major diameters of its adjacent link.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth or shown in the accompanying drawing, it is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

1. A chain comprising interengaging links, each link comprising a flattened tubular member having parallel ends at an inclination to the axis of said tubular member, each link being oval in a plane perpendicular to the axis of the link, the axes of adjacent links being one in one direction and the other in an opposite direction, each tubular member being made of a single piece of coiled wire comprising a flattened helix of substantially circular helical convolutions, the number of convolutions in each link being limited by the minor diameter of the coils, and adjacent links being oppositely wound, each link having a major diameter and a minor diameter and the ends of each link being adjacent the ends of the major diameter, and the major diameters of said links being in a direction lengthwise of the chain, and the minor diameters of said links being in a direction transverse to the length of the chain, whereby the ends of each link, except the end links, are hidden by adjacent links, the axes of

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each link being at an angle inclined to the plane of each of the convolutions of said link.

2. A chain comprising interengaging links, each link comprising a flattened tubular member having parallel ends at an inclination to the axis of said tubular member, each link being oval in a plane perpendicular to the axis of the link, the axes of adjacent links being one in one direction and the other in an opposite direction, each tubular member being made of a single piece of coiled wire comprising a flattened helix of substantially circular helical convolutions, the number of convolutions in each link being limited by the minor diameter of the coils, and adjacent links being oppositely wound, each link having a major diameter and a minor diameter and the ends of each link being adjacent the ends of the major diameter, and the major diameters of said links being in a direction lengthwise of the chain, and the minor diameters of said links being in a direction transverse to the length of the chain, whereby the ends of each link, except the end links, are hidden by adjacent links, and the convolutions of each link contacting so that the coil of each link is closed along its length, the axes of each link being at an angle inclined to the plane of each convolution of said link.

3. A chain comprising interengaging links, each link comprising a flattened tubular member having parallel ends at an inclination to the axis of said tubular member, each link being oval in a plane perpendicular to the axis of the link, the axes of adjacent links being at an inclination to each other, each tubular member being made of a single piece of coiled wire comprising a flattened helix of substantially circular helical convolutions, the number of convolutions in each link being limited by the minor diameter of the coils, each link having a major diameter and a minor diameter and the ends of each link being adjacent the ends of the major diameter, and the major diameters of said links being in a direction lengthwise of the chain, and the minor diameters of said links being in a direction transverse to the length of the chain, whereby the ends of each link, except the end links, are hidden by adjacent links, and the convolutions of each link contacting so that the coil of each link is closed along its length, the axes of each link being at an angle inclined to the plane of each convolution of said link.

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